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10/087,030	03/01/2002	Galen M. Martin	17812 (MHM 13509US01)	6482

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EXAMINER

LEON, EDWIN A

ART UNIT PAPER NUMBER

2833

DATE MAILED: 09/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,030

Applicant(s)

MARTIN ET AL.

Examiner

Edwin A. León

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7-10,12,13,15-19 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7-10,12,13,15-19 and 21-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed July 14, 2003 in which Claims 7, 15, and 21 have been amended, has been placed of record in the file as Paper No. 12.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-5, 7-10, 12-13, 15-19 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green et al. (U.S. Patent No. 5,348,488) in view of Okada (U.S. Patent No. 5,252,096). With regard to Claims 1, 5 and 7, Green et al. discloses an electrical connector (10) of a type which is connectable to a substrate (150), comprising: a housing (12); a plurality of electrical contacts (40) carried by the housing (12), each contact (40) having contact interface (44) interconnectable with a reciprocal contact interface (156) carried by the substrate (150); a contact guide (50) having a plurality of apertures (56) positioned to align and mate with the contact interfaces (44) of the contacts (40); and the housing (12) including locking post (80) configured to mate with

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reciprocal aperture (58,59,70) formed in both the contact guide (50) and the substrate (150) for securing the contact guide (50) and the substrate (150) to the housing (12), the locking post (80) having a base portion (30) that is secured within the reciprocal apertures (58,59,70) in the contact guide (50). See Figs. 1-8.

However, Green et al. doesn't show the locking post being a bifurcated post having a locking feature on a distal end thereof, the locking feature being snapably secured within the reciprocal aperture in the substrate, and having first and second opposed legs of different lengths which are compressible towards one another for insertion into the reciprocal aperture in the substrate, at least one of the opposed legs including a locking feature configured to lockingly engage with a bottom surface of the substrate when the opposed legs are inserted into the reciprocal aperture in the substrate.

Okada discloses the concept of having a bifurcated post (18,19) having a locking feature (22,23) on a distal end thereof, the locking feature (22,23) being snapably secured within the reciprocal aperture (14) in the substrate (12), and having first and second opposed legs (18,19) of different lengths which are compressible towards one another for insertion into the reciprocal aperture (14) in the substrate (12), at least one of the opposed legs (18,19) including a locking feature (22,23) configured to lockingly engage with a bottom surface of the substrate (12) when the opposed legs (18,19) are inserted into the reciprocal aperture (14) in the substrate (12). See Figs. 2, 4 and 6.

Thus, it would have been obvious of ordinary skill in the art at the time the invention was made to modify the connector of Green et al. by making the locking post

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a bifurcated post having a locking feature on a distal end thereof, the locking feature being snapably secured within the reciprocal aperture in the substrate, and having first and second opposed legs of different lengths which are compressible towards one another for insertion into the reciprocal aperture in the substrate, at least one of the opposed legs including a locking feature configured to lockingly engage with a bottom surface of the substrate when the opposed legs are inserted into the reciprocal aperture in the substrate as taught in Okada in order to mount, couple and lock the connector to the substrate more efficiently and more firm.

With regard to Claim 3, Green et al. discloses the locking post (80) being sized and shaped to form an interference fit with the reciprocal aperture (58,59,70) in the contact guide (50). See Figs. 1-8.

With regard to Claim 4, Green et al. discloses the base portion (30) of the post (80) includes an enlarged diameter portion (30) sized to form an interference fit with the reciprocal aperture (58,59,70) formed in the contact guide (50). See Figs. 1-8.

With regard to Claim 8, Green et al. discloses the contact interfaces (44) comprising male pin connectors. See Figs. 1-8.

With regard to Claims 9, 13 and 15, Green et al. discloses an electrical connector (10), comprising: a housing (12) having a substrate (150) end mateable with a substrate (150) and a connector end (18) mateable with a second electrical connector (100); a plurality of electrical contacts (40) carried by the housing (12), each contact (40) having a first contact interface (22) positioned in the substrate (150) end of the housing (12) for interconnection with a reciprocal contact interface (156) carried by the substrate (150)

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and a second contact interface (48) positioned in the connector end (18) of the housing (12) for interconnection with a reciprocal contact interface (102) carried by the second electrical connector (100); a contact guide (50) configured to mate with the substrate (150) end of the housing (12), the contact guide (50) including a plurality of apertures (56) positioned to matingly align with the first contact interfaces (44); and a locking post (80) having a base portion (30) for securing the housing (12) to the contact guide (50). See Figs. 1-8.

However, Green et al. doesn't show the locking post having a distal end snapably securing the housing to the substrate, with first and second opposed legs of different lengths being compressible towards one another to allow the locking mechanism to be inserted into the reciprocal aperture in the substrate and being configured to lockingly engage with a bottom surface of the substrate.

Okada discloses the concept of having a locking mechanism (20) having the locking post (18,19) having a distal end (22,23) snapably securing the housing (10) to the substrate (12), with first and second opposed legs (18,19) of different lengths being compressible towards one another to allow the locking mechanism (20) to be inserted into the reciprocal aperture (14) in the substrate (12) and configured to lockingly engage with a bottom surface of the substrate (12). See Figs. 2, 4 and 6.

Thus, it would have been obvious of ordinary skill in the art at the time the invention was made to modify the connector of Green et al. by having a distal end snapably securing the housing to the substrate, with first and second opposed legs of different lengths being compressible towards one another to allow the locking

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mechanism to be inserted into the reciprocal aperture in the substrate and configured to lockingly engage with a bottom surface of the substrate as taught in Okada in order to mount, couple and lock the connector to the substrate more efficiently and more firm.

With regard to Claim 10, Green et al. discloses the first contact interface (22) being oriented perpendicular to the second contact interface (48). See Figs. 1-8.

With regard to Claim 12, Green et al. discloses the post (80) has an enlarged portion (30) sized to form an interference fit with the reciprocal aperture (58,59,70) in the contact guide (50). See Figs. 1-8.

With regard to Claim 16, Green et al. discloses the first contact interfaces (44) comprising male pin connectors. See Figs. 1-8.

With regard to Claim 17, 19 and 21, Green et al. discloses an electrical connector (10), comprising: a housing (12) having a substrate (150) end matable with the substrate (150) and a connector end (18) matable with a second electrical connector (100); a plurality of electrical contacts (40) carried by the housing (12), each contact (40) having a first contact interface (22) positioned in the substrate end of the housing (12) for interconnection with a reciprocal contact interface (156) carried by the substrate (150) and a second contact interface (48) positioned in the connector end (18) of the housing (12) for interconnection with a reciprocal contact interface (102) carried by the second electrical connector (100); a contact guide (50) configured to mate with the substrate end of the housing (12), the contact guide (50) including a plurality of apertures (56) positioned to matingly align with the first contact interfaces (44); and first and second posts (18) extending from the housing (12), each of the posts (18) having a

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base portion (30) configured to mate with a reciprocal aperture (58,59,70) formed on the contact guide (50). See Figs. 1-8.

However, Green et al. doesn't show the locking posts having a locking feature on a distal end and configured to lockingly engage with a bottom surface of the substrate, the locking feature being snapably secured within the reciprocal aperture in the substrate, and first and second opposed legs of different lengths having a locking feature and being compressible towards one another to allow the locking mechanism to be inserted into the reciprocal aperture in the substrate.

Okada discloses the concept of having a locking mechanism (20) with locking posts (18,19) having a locking feature (22,23) on a distal end and configured to lockingly engage with a bottom surface of the substrate (12), the locking feature (22,23) being snapably secured within the reciprocal aperture (14) in the substrate (12), and first and second opposed legs (18,19) of different lengths having a locking feature (22,23) and being compressible towards one another to allow the locking mechanism (20) to be inserted into the reciprocal aperture (14) in the substrate (12). See Figs. 2, 4 and 6.

Thus, it would have been obvious of ordinary skill in the art at the time the invention was made to modify the connector of Green et al. by including a locking feature on a distal end and configured to lockingly engage with a bottom surface of the substrate, the locking feature being snapably secured within the reciprocal aperture in the substrate, and first and second opposed legs of different lengths having a locking feature and being compressible towards one another to allow the locking mechanism to

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be inserted into the reciprocal aperture in the substrate as taught in Okada in order to mount, couple and lock the connector to the substrate more efficiently and more firm.

With regard to Claim 18, Green et al. discloses the post (80) has an enlarged portion (30) sized to form an interference fit with the reciprocal aperture (58,59,70) in the contact guide (50). See Figs. 1-8.

With regard to Claim 22, Green et al. discloses the first and second contact interfaces (44) comprising male pin connectors. See Figs. 1-8.

With regard to Claim 23, Green et al. discloses the first contact interface (22) being oriented perpendicular to the second contact interface (48). See Figs. 1-8.

Response to Arguments

4. Applicant's arguments filed July 14, 2003 have been fully considered but they are not persuasive. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

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In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to Applicant's argument that there is no suggestion to combine the references, the Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. *In re Nomiya*, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. *In re Bozek*, In this case, it is the Examiner's opinion that one with ordinary skill in the art would find obvious to modify the connector of Green et al. by making the locking post a bifurcated post having a locking feature on a distal end thereof, the locking feature being snapably secured within the reciprocal aperture in the substrate, and having first and second opposed legs of different lengths which are compressible towards one another for insertion into the reciprocal aperture in the substrate, at least one of the opposed legs including a locking feature configured to lockingly engage with a bottom surface of the substrate when the opposed legs are inserted into the reciprocal aperture

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in the substrate as taught in Okada in order to mount, couple and lock the connector to the substrate more efficiently and more firm.

In response to Applicant's arguments regarding Claims 1, 9 and 17 that the Green et al. reference doesn't show the locking post being configured to secure the contact guide, the housing and the substrate, Applicant is reminded that the combination is the one that meet the claim and not the Green et al. reference on its own. The concept of having the opposed legs and the locking feature shown in Okada with applied to the post shown in Green et al. would result in a locking post having opposed legs and the locking features that would secure the contact guide (50), the housing (12) and the substrate (150). This combination is believed to meet Applicant's claims.

Conclusion

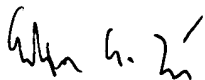
5. **THIS ACTION IS MADE FINAL** necessitated by amendment. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Edwin A. Leon
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September 9, 2003



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